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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,340	06/04/2001	Edward E Tapanes	43153-9062	3208

7590

01/31/2003

David R Price
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EXAMINER

SUCHECKI, KRISTYNA

ART UNIT	PAPER NUMBER
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2882

DATE MAILED: 01/31/2003

#13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/857,340

Applicant(s)

TAPANES ET AL.

Examiner

Krystyna Suchecki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6, 9-14, 20, 22 and 23 is/are allowed.
- 6) ☒ Claim(s) 15-18 and 26-28 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 15, 18, 19, 21, 24 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☒ Interview Summary (PTO-413) Paper No(s). 11, 12
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 7, 21 and 24 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 1 and 20 currently include the limitations of claims 7, 21 and 24 via means plus function language, the limitations being defined on page 9 of the specification to include certain detection means and waveguide composition.
2. Claims 8 and 25 are objected to for being dependent upon previously objected claims.
3. Claim 15 is objected to because of the following informalities: a typographical error places a semicolon after the preamble, this should be a colon. Appropriate correction is required.
4. Claim 18 is objected to for reciting the limitation "the parameter" in lines 14-15. There is insufficient antecedent basis for this limitation in the claim.
5. Claim 19 is objected to for reciting the limitation "the splice" in line 34. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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7. Claims 15-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Udd (US 5,636,021).

8. Regarding Claims 15-18, Udd inherently teaches a method for monitoring a structure to locate the position of an event (Abstract), including the steps of: launching light into a waveguide so that the light is caused to propagate in both directions along the waveguide to thereby provide counter-propagating optical signals in the waveguide, the waveguide being capable of having the counter-propagating optical signals or some characteristic of the signals modified or effected by an external parameter caused by the event, to provide modified counter-propagating optical signals which continue to propagate along the waveguide; and detecting the modified counter-propagating optical signals effected by the parameter and for determining the time difference between the receipt of the modified signals in order to determine the location of the event (Column 5, line 26- Column 6, line 59); and

- a. wherein the light is launched into both ends of the waveguide to provide the counter-propagating signals (Figure 2); and
- b. wherein the light is launched into both ends of the waveguide from a single light source (Figure 2); and
- c. Wherein a parameter is quantified and /or identified from the modified signals (Column 6, lines 52-59).

9. Udd teaches the acquisition of optical path length differences (Column 5, line 26- Column 6, line 59), and also teaches that optical path length differences represent time delay differences, especially when associated with the naturally occurring phase differences (Column 4, line 30- Column 5, line 25). Therefore both path length and time delay determinations can

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yield information for the determination of a location of an event. Because the Udd reference teaches the use of the same linking piece of acquired information, it is inherent that the same information will yield the same determination of solvable data (See *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980)).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Udd in view of Udd (5,311,592).

12. Regarding Claims 26-28, Udd ('021) inherently teaches a method for monitoring an optical fiber into which signals are launched and from which signals are received, to locate the position of a disturbance in the fiber including the steps of: launching light into a waveguide (fiber) so that the light is caused to propagate in both directions along the waveguide to thereby provide counter-propagating optical signals in the waveguide, the waveguide being capable of having the counter-propagating optical signals or some characteristic of the signals modified or effected by an external parameter caused by the event, to provide modified counter-propagating optical signals which continue to propagate along the waveguide; and detecting the modified counter-propagating optical signals effected by the parameter and for determining the time

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difference between the receipt of the modified signals in order to determine the location of the event (Column 5, line 26- Column 6, line 59); and

d. wherein the light is launched into both ends of the waveguide to provide the counter-propagating signals (Figure 2); and

13. wherein the light is launched into both ends of the waveguide from a single light source (Figure 2)

14. Udd teaches the acquisition of optical path length differences (Column 5, line 26- Column 6, line 59), and also teaches that optical path length differences represent time delay differences, especially when associated with the naturally occurring phase differences (Column 4, line 30- Column 5, line 25). Therefore both path length and time delay determinations can yield information for the determination of a location of an event. Because the Udd reference teaches the use of the same linking piece of acquired information, it is inherent that the same information will yield the same determination of solvable data (See *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980)).

15. Udd fails to teach the system of '021 explicitly applied to a communication link.

16. Udd instead cross-references a patent to Udd ('592) and teaches the application of a detection system to a communication link (Column 12, lines 25-56). The communication link of '592 allows the monitoring of a communication link without installing a separate communication line, i.e., the communication link can be used for both monitoring and data transmission.

17. Since both the '021 and '592 patents teach the monitoring of a communication link, it would have been obvious to apply the link of '021 as taught in '592 so that the communication link of '021 can be used for both monitoring and data transmission.

Allowable Subject Matter

18. Claims 1-6, 9-14, 20, 22-23 are allowed.
19. Claim 19 would be allowable if rewritten or amended to overcome the objection set forth in this Office action.
20. The following is an examiner's statement of reasons for allowance: The means plus function language of Claims 1 and 20 for "detector means" causes a simultaneous detection limitation to be a part of the other claimed limitations. Prior art fails to teach detectors for simultaneous reception of radiation from counterpropagating silica waveguides in further combination with processing means and a light source. Prior art teaches away from simultaneous detection by introducing additional path-length delays, as is taught by Udd (US 5,636,021).
21. Claim 19 contains allowable subject matter for teaching the use and connections of lead and sensing fiber portions in combination with counter-propagating signals and other claimed elements.
22. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

23. Applicant's arguments with respect to claims 15-18 and 26-28 have been considered but are moot in view of the new ground(s) of rejection.

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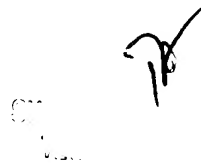
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krystyna Suchecki whose telephone number is (703) 305-5424. The examiner can normally be reached on M-F 8-6, with alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.

ks
January 24, 2003

Handwritten signature and initials, possibly "JF", with some faint markings below.